

Nemaha County

Estimated Economic Impact of Agriculture, Food, and Food Processing Sectors

5/24/2016

Using the most recent IMPLAN data available (2014) adjusted for 2016, 21 agriculture, food, and food processing sectors were analyzed to determine their overall contribution to the Nemaha County economy.¹

These 21 sectors have a total direct output of approximately **\$1 billion** and support **1,930.8 jobs** in Nemaha County. Running the model for all 21 sectors simultaneously produces the following results:

Agriculture, Food, and Food Processing Sector Contribution to Overall Nemaha County Economy						
Impact Type ²	Employment	% Employment	Total Value Added ³	Total Value Added % of Gross Regional Product ⁴	Output ⁵	Output % of Gross Regional Product
Direct Effect	1,930.8	24.21%	\$324,506,408.26	47.61%	\$1,010,289,420.38	148.24%
Indirect Effect	580.0	7.27%	\$49,537,495.77	7.27%	\$95,541,308.07	14.02%
Induced Effect	477.4	5.99%	\$30,239,637.15	4.44%	\$57,738,551.99	8.47%
Total Effect	2,988.2	37.46%	\$404,283,541.18	59.32%	\$1,163,569,280.45	170.73%

As shown in the above table, agriculture, food, and food processing sectors support **2,988.2 jobs**, or **37.46%** of the entire workforce in the county. These sectors provide a total economic contribution of approximately **\$1.2 billion**, roughly **170.73% of the economy**.

Another metric used to calculate the importance of sectors in an economy is their value added as a percentage of GRP. Total value added by the 21 agriculture, food, and food processing sectors is approximately **\$404.3 million**, or **59.32% of the GRP**. This indicates that personal income, business income, and taxes generated by these sectors account for **59.32% of the total economy**.

The following tables document the overall summary numbers of the model, top industries affected by employment and output, and a listing of all industries that were analyzed.

¹ Article on building a contribution analysis in IMPLAN that avoids double counting:

http://www.implan.com/index.php?option=com_content&view=article&id=660%3A660&catid=253%3AKB33&Itemid=70

² Direct, indirect, and induced effects sum together to estimate the total economic contribution in the state. **Direct effects** capture the contribution from agricultural and food products. **Indirect effects** capture the economic benefit from farms and agricultural businesses purchasing inputs from supporting industries within the state. **Induced effects** capture the benefits created when employees of farms, agricultural businesses, and the supporting industries spend their wages on goods and services within the state.

³ Value added = labor income + indirect business taxes + other property type income.

⁴ GRP = final demand of households + governments expenditures + capital + exports - imports - institutional sales.

⁵ Output = intermediate inputs + value added.

In the top ten agriculture, food, and food processing sectors by employment, the beef cattle ranching and farming, including feedlots and dual-purpose ranching and farming sector is the top employer with **434.7 employees**. This table also shows the amount of jobs that are created by the agriculture industry in Nemaha County.

Top Ten Sectors by Employment		
Sector	Total Employment	Total Output
Beef cattle ranching and farming, including feedlots and dual-purpose ranching and farming	434.7	\$77,386,459.19
Animal production, except cattle and poultry and eggs	415.6	\$76,288,596.95
Dog and cat food manufacturing	282.1	\$379,936,094.97
Food product machinery manufacturing	256.7	\$75,947,948.04
Wholesale trade	186.3	\$39,408,202.09
Farm machinery and equipment manufacturing	161.4	\$93,895,260.01
Other animal food manufacturing	107.5	\$164,007,613.61
Truck transportation	92.1	\$16,805,773.61
Hospitals	67.5	\$7,953,932.84
Grain farming	58.1	\$34,573,548.57

The dog and cat food manufacturing sector directly contributes approximately **\$379.9 million** to the Nemaha County economy. The table below also shows the amount of revenue that is generated in other industries by having a strong agriculture industry.

Top Ten Sectors by Output		
Sector	Total Employment	Total Output
Dog and cat food manufacturing	282.1	\$379,936,094.97
Other animal food manufacturing	107.5	\$164,007,613.61
Farm machinery and equipment manufacturing	161.4	\$93,895,260.01
Beef cattle ranching and farming, including feedlots and dual-purpose ranching and farming	434.7	\$77,386,459.19
Animal production, except cattle and poultry and eggs	415.6	\$76,288,596.95
Food product machinery manufacturing	256.7	\$75,947,948.04
Wholesale trade	186.3	\$39,408,202.09
Oilseed farming	20.4	\$37,924,703.01
Grain farming	58.1	\$34,573,548.57
Dairy cattle and milk production	39.3	\$29,314,573.23

Below is a summary of all agriculture data with employment levels and output level. These values can tell how many jobs are represented by each agriculture, food, and food processing sector and the output they contributed to the Nemaha County economy.

All Agriculture, Food, and Food Processing Sectors		
Sector	Total Employment	Total Output
Oilseed farming	20.4	\$37,924,703.01
Grain farming	58.1	\$34,573,548.57
Vegetable and melon farming	0.0	\$5,951.00
Fruit farming	0.7	\$141,636.50
Tree nut farming	0.1	\$45,593.50
Greenhouse, nursery, and floriculture production	0.6	\$207,909.50
All other crop farming	36.7	\$4,612,784.55
Beef cattle ranching and farming, including feedlots and dual-purpose ranching and farming	434.7	\$77,386,459.19
Dairy cattle and milk production	39.3	\$29,314,573.23
Poultry and egg production	0.3	\$476,427.20
Animal production, except cattle and poultry and eggs	415.6	\$76,288,596.95
Dog and cat food manufacturing	282.1	\$379,936,094.97
Other animal food manufacturing	107.5	\$164,007,613.61
Dry, condensed, and evaporated dairy product manufacturing	9.6	\$16,452,492.80
Meat processed from carcasses	11.9	\$6,025,509.02
Bread and bakery product, except frozen, manufacturing	12.9	\$8,252,593.66
Frozen cakes and other pastries manufacturing	0.7	\$90,968.63
Farm machinery and equipment manufacturing	161.4	\$93,895,260.01
Food product machinery manufacturing	256.7	\$75,947,948.04
Veterinary services	24.4	\$2,185,375.81
Landscape and horticultural services	56.8	\$2,517,380.65

All 105 counties in Kansas have an IMPLAN model and an agriculture, food, and food processing contribution summary. These values do not factor in the retail environment of food sales. Food retail is important, but in order to provide the most accurate picture of what production agricultural and processing contributes to Nemaha County, the retail sector was omitted.